Non-reduction takes place in some cells, as already described in triploid plants[2], resulting in 2 giant cells from each pollen-mother-cell instead of the 4 pollen grains expected after reduction. The pollen-mother-cells are about half the volume of the pollen-mother-cells of diploid Daturas. Apparently the giant cells form the surviving pollen grains of the haploid. Since they are half the size of mother-cells from which they arise (or one quarter the size of the mother-cells of diploids) they are equal in size to normal pollen grains of diploids and may be expected to function in the same manner.

Haploidy is the normal condition in gametophytes of all plants and is a regular occurrence in the males of such insects as honey bees, which, however, fail to undergo reduction at the formation of gametes. It has been reported as an occasional phenomenon in sporophytes of ferns.

A haploid plant in *Datura* is a genetic novelty among flowering plants for two reasons: first, it is a sporophyte and yet has the somatic chromosome number characteristic of the gametophyte of the species; and second, the chromosomes while in monosomes, or sets of one each, still undergo a process of reduction though without synaptic mates.

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THE MASS OF THE ELECTRON AT SLOW VELOCITY

ALL assumptions regarding the form of the electron in motion, with the possible exception of the Parsons magneton, lead to expressions for the longitudinal and transverse masses such that the mass of the electron at slow velocity is a constant, m_o, independent of the direction in which the inertia test is applied.

An experimental confirmation is being carried out with an apparatus similar to that previously used by one of the authors[1] except that the cold cathode is replaced by an incandescent filament to assure the presence of all possible velocities at the same time.

If an electron beam accelerated by a given discharge voltage emerges from a tube in the anode into the region between two horizontal metal plates forming an electrostatic field and if the electrostatic field be produced by the same voltage as the discharge, or a constant fractional part of it, then the point where the beam will strike the lower (positive) plate is independent of the discharge voltage and hence independent of the velocity of the electrons provided the transverse and longitudinal masses be equal. This will be the case for velocities below 10,000 volts.

Visual results show the position of the spot on the phosphorescent screen deposited on the lower metal plate to be independent of the exciting voltage, thus confirming the equality of the masses at slow velocity. The photographic record of spot position and a more complete description will be given later.

The method is equally applicable to electrons of high velocity. The experimental work of verifying the expressions for the transverse and longitudinal masses at high velocity is being continued.

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THE HYDROGEN-ION CONCENTRATION OF SOILS AS AFFECTED BY DRYING[1]

MUCH interest has been manifested of late in the determination of the concentration of hydrogen-ions in agricultural soils and in the study and possible correlation of data thus secured. It was my privilege to attend the meetings of the American Chemical Society in New York last fall and, in one of the sections, to listen to a somewhat lengthy discussion of the probable effect of drying and heating soils on their P_H values. The discussion was of necessity largely a matter of opinion due to the paucity of experimental data bearing directly upon this phase of the subject.

During the past few months, in connection with research projects relating to the subjects of acidity and aluminum toxicity in soils, the

[2] Belling, John, and A. F. Blakeslee: "The assortment of chromosomes in triploid Daturas." In press for *Amer. Nat.*

[1] L. T. Jones: *Phys. Rev.*, 8, p. 52, 1916.

[1] Contribution 286 of the Station.